



#### KEY ADVANTAGES

**Low latency UHD/HD Resolution encoding (Typically 35mS input to output)**

**Single input Interface supporting 3G HD-SDI, 6G and 12G**

**two independent RF outputs at 2GHz and 7GHz (other frequencies available)**

**Optional Bi-directional Camera Control modules**

**Supports Anton Bauer and V Lock battery plates**

**Support for UHD/HD HDR and also Timecode (film industry) signal insertion**

**IP Streaming and Web browser control**

**SDI In can be switched to ASI in to support transport stream relay**

## Sapphire-B2TX

The Sapphire-B2TX camera-back transmitter, integrates a True 4K HEVC encoder with two COFDM modulators creating a single, compact package, suitable for camera-back mounting. The Sapphire-B2TX is equipped with a single video input capable of 3G HD-SDI, 6G and 12G, thus allowing video formats to UHD.

The dual 100mW COFDM outputs in separate 2GHz and 7GHz bands, make the Sapphire-B2TX ideal for operators wanting frequency agility.

Back to back V Lock or Anton Bauer battery plates facilitate pass-through power whilst an additional external power connector is provided at the base. Analogue stereo audio inputs are supported as well as camera control and Tally interfaces.

Sapphire-B2TX is equipped with a high-quality, low-latency H.265 (H.264 is also available) encoder capable of UHD and HD formats in 10bit 4:2:2 with automatic HDR support.

Up to 8 stereo pairs of audio in either MPEG-1 layer 1, or PCM format (4 stereo pairs in AAC-LC) can be extracted and encoded by The Sapphire-B2TX whilst analogue audio inputs with power are included for direct microphone connection.

Camera control and transmitter settings are accessible through a single colour panel on the side or using the web browser interface.

Bi-directional camera control is a hardware option in the Sapphire-B2TX.

**Connectors**

RF out	2x NType Female
RF In (Cam Control)	SMA Female
Video/ASI In	BNC 36/6G/12G or ASI
Analogue audio in	Hirose 6 way female
Power and CTRL	Hirose 6 way male
Auxiliary Data	Hirose 6 way male
Camera CTL	Hirose 10 way male
Tally	Hirose 4 way female
Ethernet	RJ45

**RF**

Frequency Band 1	2-2.9GHz (others on request)
Frequency Band 2	7-7.5GHz (others on request)
Tuning Step Size	250kHz
O/P Power	100mW

**Modulation**

Modulation Modes	DVBT, Dual Pedestall, UMLV and ISDB-T
DVB-T Bandwidth	8MHz, 7MHz and 6MHz modes
DVB-T Guard	1/32, 1/16, 1/8, 1/4
DVB-T FEC	1/2, 2/3, 3/4, 5/6, 7/8
DVB-T Modulation	QPSK, 16QAM, 64QAM
DVB-T Bit-rates	3.6Mbps to 32Mbps

**Video**

Video Coding	H.264 and H.265
H.265 4K UHD	2160p 23.98/24/25/29.97/30/50/59.94/60 HD. 4:2:2/4:2:0, 8/10-bit 720p 50/59.94/60 1080i 50/59.94/60 1080p 23.98/24/25/29.97/30/50/59.94/60 1080psf 23.98/24/25/29.97/30
Latency	Typically 35mS input to output

**HDR/WGC**

We support	Rec. ITU-R BT.2100-2 (PQ and HLG) Rec. ITU-R BT.2020
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**Audio**

Format	Embedded
Encoder	MPEG-1 Layer 1, MPEG-1 Layer 2, AAC-LC, Linear PCM
Quantity	4 pairs (8 pair if MPEG or Linear PCM)
Analogue	1 pair line / mic level
Power Out	P48 phantom power

**IP Streaming**

Format	Unicast / Multicast / UDP / RTP / SRT
Bitrate	25Mb/s maximum

**Camera Control**

Type	VideoSys Bi-directional 400MHz UHF
Camera Type	Sony / Grass Valley / Hitachi Panasonic / Ikegami

**Control**

Local	Joystick and menu screen
Remote	IP web browser Control

**Dimensions**

Size (WxDxH)	175 × 95 × 33mm
Weight	650g
Mounting	AB / VLock Plate / mounting plates

**Power**

DC In:	9-36V 25W typical @ 4K encoding
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**Environment**

Temperature Range	-10 to +50 °C
Sealing	Unsealed

**Product Codes**

B2TX-245745-V	2-2.9GHz and 7-7.5GHz Vlock
B2TX-245745-A	2-2.9GHz and 7-7.5GHz Anton Bauer

**Note:** Other frequencies available on request

